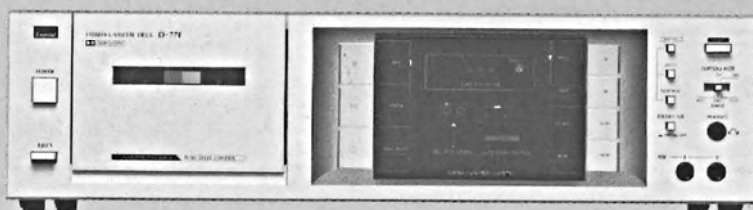


# SERVICE MANUAL

STEREO CASSETTE DECK

## SANSUI D-77F

(Silver & Black Model)



### • SPECIFICATIONS

Track . . . . .	4-Track (2-Channel Stereo)
Tape Speed . . . . .	4.8 cm/sec. (1-7/8 ips)
Heads (2-head configuration)	
Rec/pb head . . . . .	HIGH-Bs hard permalloy
Erase head . . . . .	Double-gap ferrite
Motor . . . . .	Capstan: Electronically Controlled DC Motor
	Reels: DC Motor
Wow and flutter . . . . .	within 0.05 % WRMS
Fast wind time . . . . .	approximately 80 seconds (C-60)
Frequency response (−20 VU recording/playback)	
Normal Tape (LH) . . . . .	20 to 15,000 Hz (30 to 14,000 Hz ± 3 dB)
Chrome Tape . . . . .	20 to 17,000 Hz (30 to 16,000 Hz ± 3 dB)
Metal Tape . . . . .	20 to 18,000 Hz (30 to 17,000 Hz ± 3 dB)
Signal to noise ratio (Record/Playback)	
Metal Tape (without Dolby Noise Reduction Effect)	
. . . . .	better than 58 dB (weighted)
(With Dolby Noise Reduction)	
. . . . .	better than 68 dB (above 5 kHz)
Erasurage factor (Metal Tape)	
. . . . .	more than 70 dB at 1,000 Hz
Input sensitivity and impedance (0 VU, 1,000 Hz)	
MIC . . . . .	0.4 mV/200Ω ~ 5 kΩ
LINE IN (REC) . . . . .	150 mV/47 kΩ
Output level (0 VU, 1,000 Hz)	
LINE OUT (PLAY)	
. . . . .	240 mV
Power requirements	
Power voltage . . . . .	120/220/240 V (50/60 Hz)
For U.S.A. and Canada	
. . . . .	120 V (60 Hz)
Power consumption	15 W
Dimensions . . . . .	430 mm (16-15/16") W 118 mm (4-11/16") H 223 mm (8-13/16") D
Weight . . . . .	3.6 kg (7.9 lbs) net 4.4 kg (9.7 lbs) packed

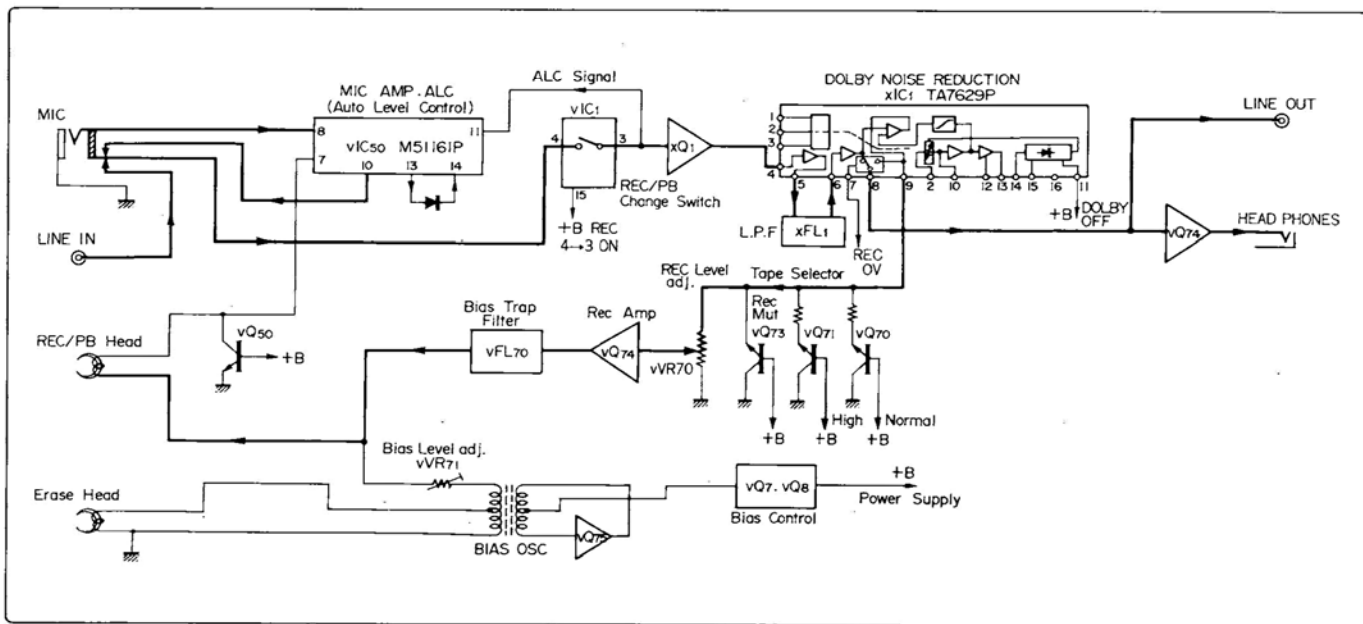
\* Design and specifications subject to changes without notice for improvements.



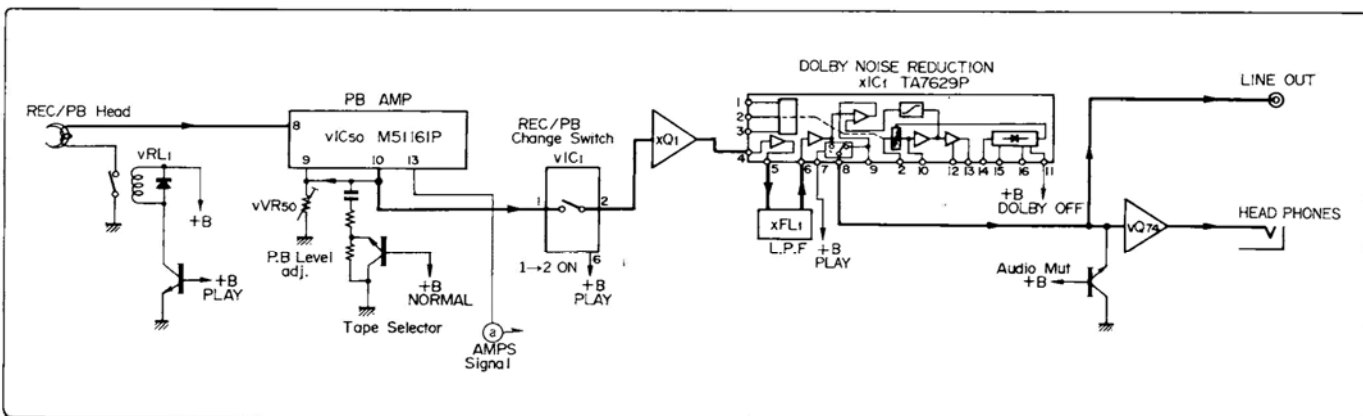
SANSUI ELECTRIC CO., LTD.

## 1. BLOCK DIAGRAM

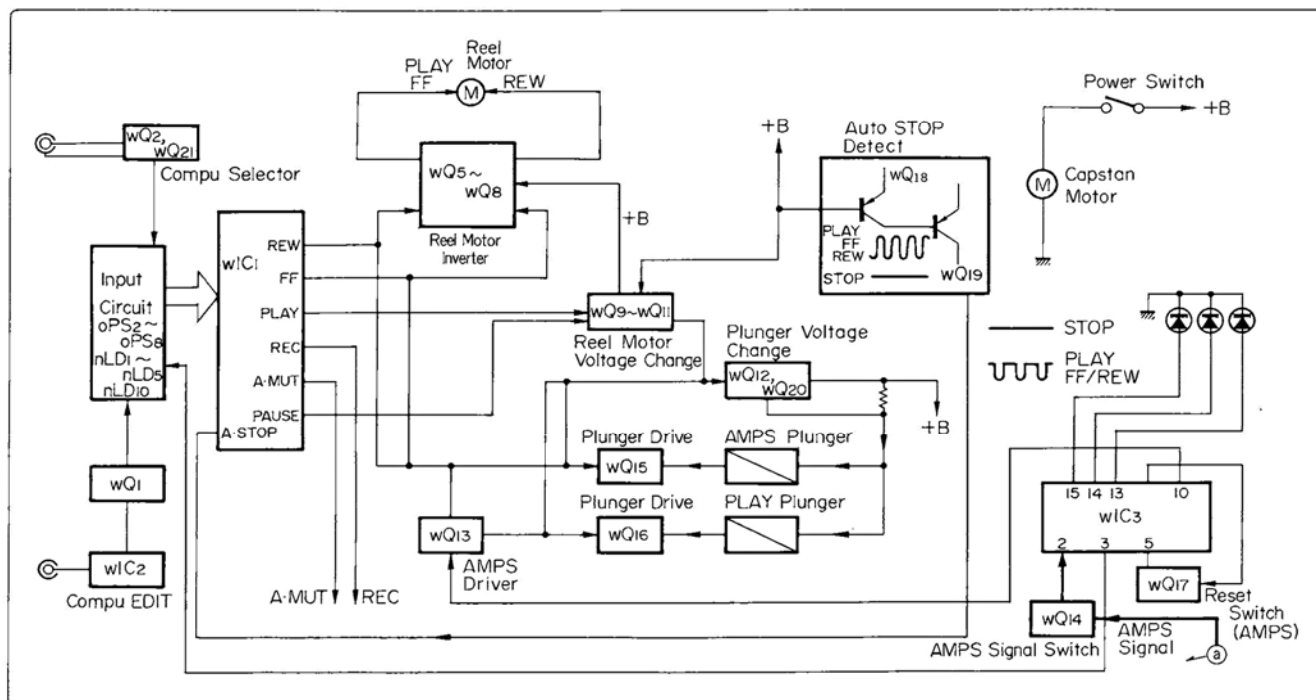
### 1-1. Recording Operation



## 1-2. Playback Operation



### 1-3. Logic Control Operation



## 2. TRANSISTOR CONDITION OF LOGIC CONTROL CIRCUIT

• See Input/Output Table of TC9143P on Page 3 and Schematic Diagram on Page 13.

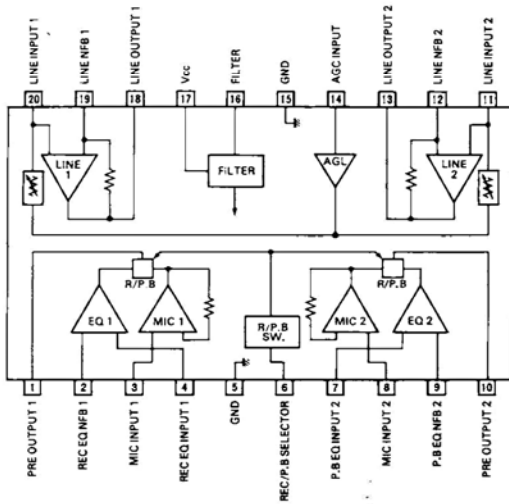
Parts No.	wQ																			
Function	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	20			
F·F					○			○		○	●		○	○			●			
REW						○	○			○	●		○	○			●			
PLAY					○			○	○		●		○		○		●			
REC/PLAY					○			○	○		●		○		○		●			
AMPS·FF					○			○	○	○	●	○		○	○	□	●			
AMPS·REW						○	○			○	●	○		○	○	□	●			
PAUSE										○			○							
STOP										○			○							

- ON  
 ● ON (During the time determined by a time constant of capacitor and resistor)  
 □ ON (When the AMPS is Reset)

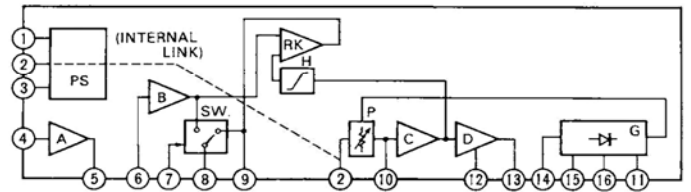
- wQ1: PAUSE Switch for Compu Edit. (When the muting signal from the turntable is applied to COMPU EDIT. Terminal, wQ1 is turned ON.)  
 wQ2: Prevention Switch for COMPU SELECTOR (wQ2 is turned ON when the mode is REC/PLAY therefore input selector of amplifier <Receiver> is not set to the TAPE-1.)  
 wQ3: TIMER Operation driver (When TIMER operation is performed, wQ4 is turned ON during the time determined by a time constant of capacitor and resistor.)  
 wQ4: Reset Switch for IC TC-9143 (When Power Switch is pushed, wQ4 is turned ON during the time determined by a time constant of capacitor and resistor, therefore Input pin No. 6 of the control IC is kept at a L-voltage level.)  
 wQ9: Reel Motor voltage change (When operation mode is FF, REW, AMPS FF or AMPS REW, Emitter voltage of the transistor changes to H-voltage level.)  
 wQ18: Current Detector for Auto Stop.  
 wQ19: Stop Switch for COMPU SELECTOR (When the PHONO or TUNER button of Amplifier <Receiver> is pushed during tape play back, wQ21 is turned ON, to stop the Cassette Deck Automatically.)

### 3. INTERIOR BLOCK DIAGRAM OF IC

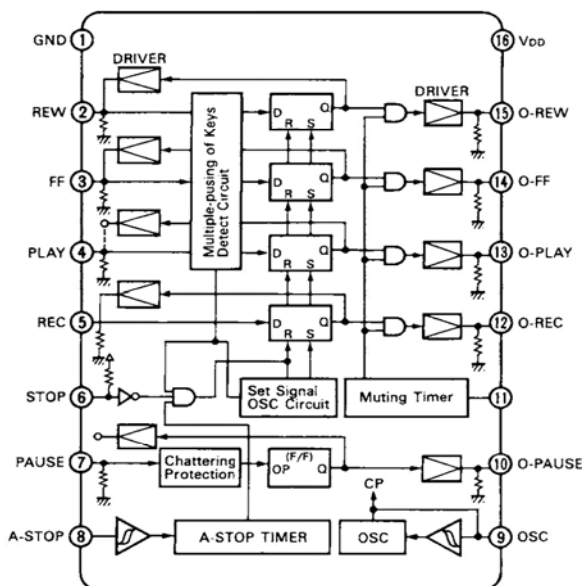
#### • M51161P (MIC Amp. & PLAY EQ. Amp. IC)



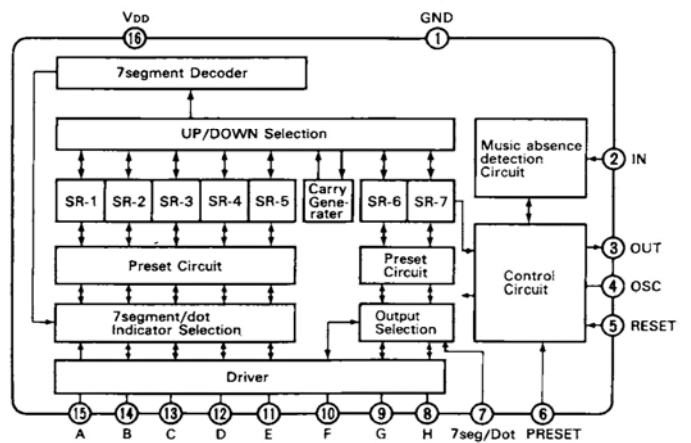
#### • TA7629P (B-type NOISE REDUCTION IC)



#### • TC9143P (Logic Control)



#### • TC9138AP (Automatic Music Search)



#### • Input/Output Table of TC9143P

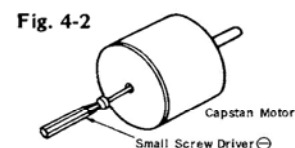
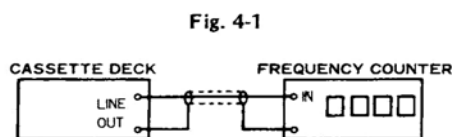
(The "○" marks denote H-Level output)

OUTPUT	O-FF	O-REW	O-PLAY	O-REC	O-MUTE	O-PAUSE
KEY INPUT						
STOP					○	
FF	○				○	
REW		○			○	
PLAY			○			
REC				○		
REC/PLAY			○	○		
P A U S E	STOP				○	○
	PLAY		○		○	○
	REC			○		○
	REC/PLAY		○	○		○
A-STOP					○	

## 4. ADJUSTMENTS

### 4-1. Tape Speed Adjustment

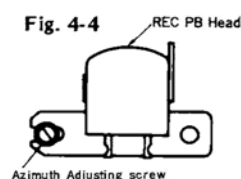
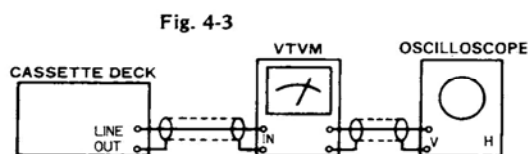
- Note: 1. Use Sansui Test Tape, SCT-S3K  
(3 kHz signals are recorded on the tape).  
2. Connections are shown in Fig. 4-1.



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	TAPE SPEED Adj.	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K.	Turn semi-variable resistor as Fig. 4-2.	3000Hz $\pm$ 45Hz	Use small screw driver.

### 4-2. Playback Adjustment

- Note: 1. Before this adjustment, clean REC/P.B. head surface.  
2. For this adjustment, use Sansui Test Tape, SCT-F10KN, SCT-L400N and SCT-F1K.  
3. Set the Dolby NR switch to be OFF.  
4. Connections are shown in Fig. 4-3.



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM, Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-4.	MAX. Output on both channels.	Refer to removal of Lid Ass'y on Page 5. After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	Same as above	Set TAPE SELECTOR to NORMAL (LH) position. Playback the TEST TAPE SCT-L400	Adjust each vVR50 on L-CH and R-CH.	320mV $\pm$ 2dB	See Top View on page 10.
3.	High Frequency Equalization Check	Same as above	Set TAPE SELECTOR to NORMAL (LH) position. Playback the TEST TAPE SCT-F1K.	_____	_____	Read output levels on both channels.
			Playback the TEST TAPE SCT-F10K	_____	_____	Confirm that the output levels are within $\pm$ 3dB comparing with the above readings.

Note: On STEP 3, set the TAPE SELECTOR to HIGH (CrO<sub>2</sub>) position during playback of SCT-10KN, and confirm the indication on VTVM drops approximately 4dB  $\sim$  5dB.

### 4-3. Recording Adjustment

#### 1) Bias Adjustment

- \* This adjustment is require, when replacing bias osc circuit, variable resistor for bias adjustment or REC/PB head.

- Note: 1. For this adjustment, use Sansui Test Tape, SCT-SA.  
2. Set the Dolby NR Switch to be OFF.  
3. Connections are shown in Fig. 4-5.

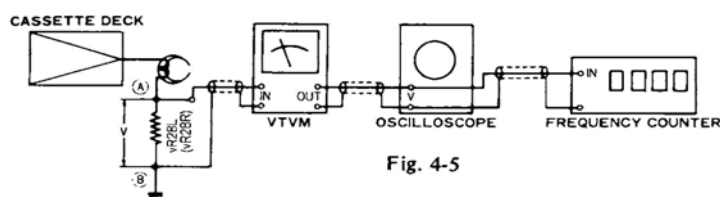
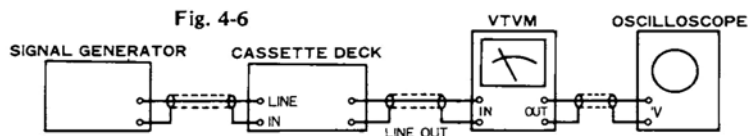


Fig. 4-5

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Recording Bias Adj.	Between (A) & (B) points of each vR28L & vR28R. VTVM, Scope, Frequency Counter	Load the TEST TAPE SCT-SA. Depress PAUSE and REC buttons. Set TAPE SELECTOR to HIGH (CrO <sub>2</sub> ) position.	Adjust vVR71L for L-CH and vVR71R for R-CH.	6.0mV	See Top View on page 10.
			Set TAPE SELECTOR to NORMAL (LH) position.	_____	_____	Confirm the indication on VTVM shows 4.4mV.
			Set TAPE SELECTOR to METAL position.	_____	_____	Confirm the indication on VTVM shows 11.0mV.

## 2) REC Level & Frequency Response Adjustment

Note: 1. Connections are shown in Fig. 4-6.  
2. Set the Dolby NR switch to be OFF.



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 150mV from S.G into LINE IN.	LINE OUT VTVM Scope	Load the TEST TAPE SCT-SA. Set TAPE SELECTOR to HIGH (CrO <sub>2</sub> ) position. 1. Depress REC and PAUSE buttons. 2. Adjust the Audio S.G. output for obtaining 230mV on VTVM. 3. Push off the PAUSE button, then record the 1kHz signal. 4. Play back the 1kHz signal. 5. Confirm that the output levels on both channels are 230mV $\pm$ 2dB on VTVM.	1. If not, turn vVR70 (L-CH) and vVR70 (R-CH) until output level 230mV $\pm$ 2 dB on both channels are obtained.	vVR70L (REC, L-CH), and vVR70R (REC, R-CH) are shown in Top View on page 10.
2.	Frequency Response Adj.	Feed 1kHz 15mV (-20dB) and 10kHz 15mV (-20dB) from S.G. into LINE IN.	Same as above	Load the TEST TAPE SCT-SA. Set TAPE SELECTOR to HIGH (CrO <sub>2</sub> ) position. 1. Record the 1kHz and 10kHz signals from S.G. 2. Play back the 1kHz and 10kHz signals, then confirm that both output levels equal.	1. If not, adjust vVR71L for L-CH and vVR71R for R-CH slightly until the output levels will be equal.	As vVR71L and vVR71R are previously adjusted, turn them slightly, if necessary.

### ◆ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	—
SCT-F1K	1 kHz	High Frequency Equalization Check	—
SCT-F10K	10 kHz	REC/PB Head Adjustment	—
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	—
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	—
*SCT-AD NORMAL (LH)	—	Recording Bias Adjustment	TDK AD
*SCT-SA HIGH (CrO <sub>2</sub> )	—	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	—	Frequency Response Check	TDK MA

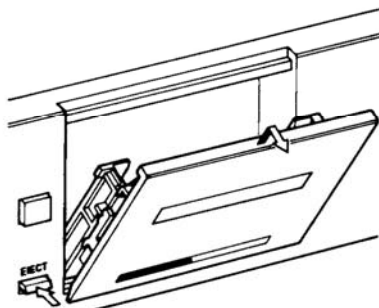
• Note: Some reference tapes marked \* are not supplied.  
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

### ◆ TAPE SELECTOR Position

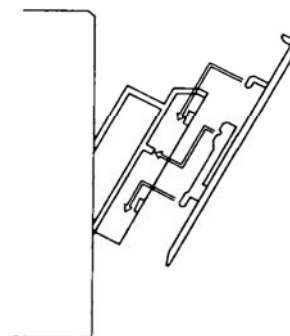
NORMAL (LH)		HIGH (CrO <sub>2</sub> )	
FUJI	FL, FXI	FUJI	FX II
MAXELL	UL, UD, XL I, XL I-S	MAXELL	XL II, XL II-S
TDK	D, AD, OD	TDK	SA, SA-X
SCOTCH	TARTAN	SCOTCH	MASTER 70
	CRYSTAL MASTER 120	SONY	JHF
SONY	AHF, BHF, CHF	AGFA	STEREO CHROM
	Low-Noise	BASF	SCR
METAL			
AGFA	SUPER	MAXELL	MX
	SUPER COLOR	TDK	MA-R, MA
	SUPER FERRO DYNAMIC	SCOTCH	Metafine
BASF	LN Super LH I	SONY	METALLIC

### ◆ Removement and Attachment of Lid Ass'y

Depress the EJECT button to open the cassette holder, and pull the Lid up and then toward you to remove it as shown in the figure.



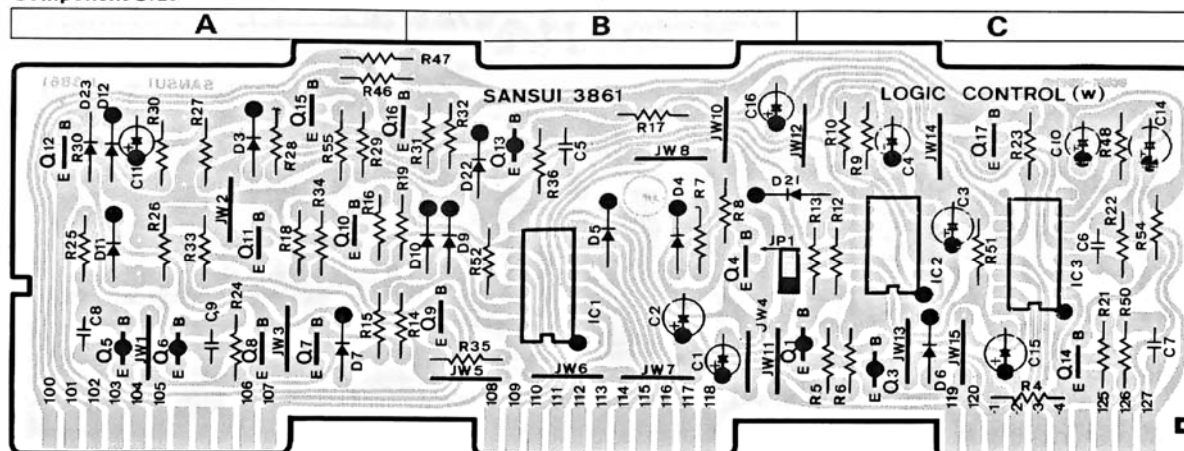
Re-attach the Lid to the cassette holder as shown in the figure.



## 5. PARTS LOCATION & PARTS LIST

### 5-1. F-3861 Mechanism Control Circuit Board (Stock No. 00706201)

Component Side



#### Parts List

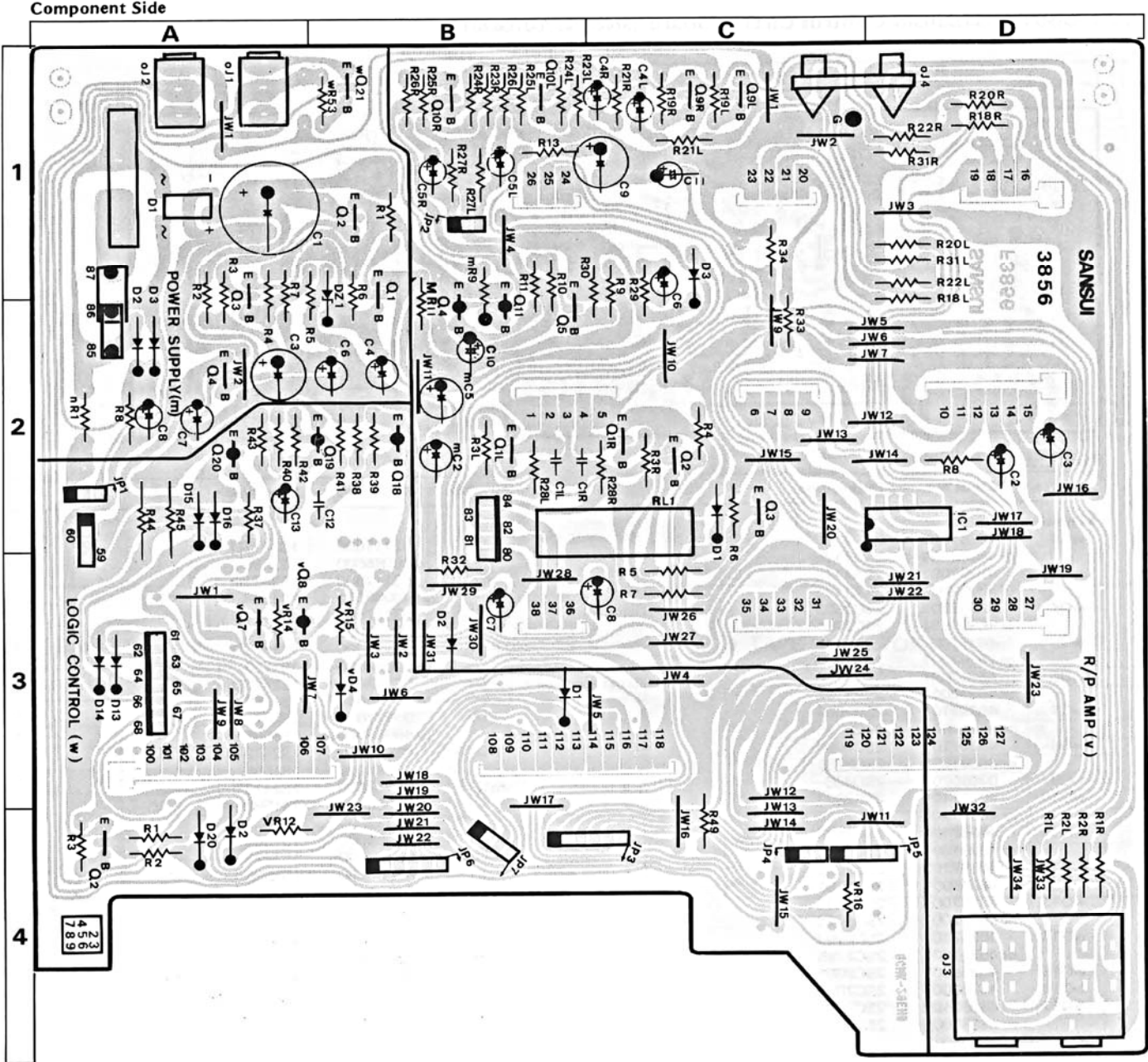
Parts No.	Stock No.	Description
●Transistor		
wQ1	46367001	2SA1115
	or 46392001	2SA1175
wQ3	46367001	2SA1115
	or 46392001	2SA1175
wQ4	46367101	2SC2603
	or 46391901	2SC2785
wQ5	46367001	2SA1115
	or 46392001	2SA1175
wQ6	46367001	2SA1115
	or 46392001	2SA1175
wQ7	46367101	2SC2603
	or 46391901	2SC2785
wQ8	46367101	2SC2603
	or 46391901	2SC2785
wQ9	03085201	2SD438
wQ10	46367101	2SC2603
	or 46391901	2SC2785
wQ11	46367101	2SC2603
	or 46391901	2SC2785
wQ12	46367101	2SC2603
	or 46391901	2SC2785
wQ13	46367001	2SA1115
	or 46392001	2SA1175
wQ14	46367101	2SC2603
	or 46391901	2SC2785
wQ15	46359801	2SC2001
wQ16	46359801	2SC2001
wQ17	46367101	2SC2603
	or 46391901	2SC2785
●IC		
wIC1	46406700	TC9143P
wIC2	46165600	MSM4023RS
wIC3	46369800	TC9138AP

●Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual.

Parts No.	Stock No.	Description
●Diode		
wD3	03117600	1S2473D
	or 46086000	1S1588
wD4	03117600	1S2473D
	or 46086000	1S1588
wD5	03117600	1S2473D
	or 46086000	1S1588
wD6	03117600	1S2473D
	or 46086000	1S1588
wD7	03117600	1S2473D
	or 46086000	1S1588
wD9	03117600	1S2473D
	or 46086000	1S1588
wD10	03117600	1S2473D
	or 46086000	1S1588
wD11	03117600	1S2473D
	or 46086000	1S1588
wD12	03117600	1S2473D
	or 46086000	1S1588
wD22	03117600	1S2473D
	or 46086000	1S1588
wD23	03111600	1S2473D
	or 03111800	1S1588
wC5	07216600	47000pF 25V C.C.
wC6	07216600	47000pF 25V C.C.
wC7	07216600	47000pF 25V C.C.
wC8	07215800	10000pF 25V C.C.
wC9	07215800	10000pF 25V C.C.



5-2. F-3856 Main Circuit Board (Stock No. 00705701)



Parts List

Parts No.	Stock No.	Description
•Transistor		
mQ1	03085201	2SD438
mQ2	03083901	2SD313
mQ3	46367101	2SC2603
	or 46391901	2SC2785
mQ4	03085201	2SD438
•Diode		
mD1	46273600	DBB10-B
mD2	03117600	1S2473D
	or 46086000	1S1588
mD3	03117600	1S2473D
	or 46086000	1S1588
•Zener Diode		
mDZ1	46111500	05Z5.6-Y
mR1	46228600	47Ω 1/2W N.I.R.

Parts No.	Stock No.	Description
nR1	46228000	15Ω 1/2W N.I.R.
oJ1	46148200	Mini Jack, Compu
oJ2	46148200	Selector
		Mini Jack, Compu
oJ3	46212000	Edit.
oJ4	46371500	Jack, Mic
		4P Terminal Board
•Transistor		
vQ1	46367101	2SC2603
	or 46391901	2SC2785
vQ2	46367101	2SC2603
	or 46391901	2SC2785
vQ3	46367101	2SC2603
	or 46391901	2SC2785
vQ4	46367001	2SA1115
	or 46392001	2SA1175

Parts No.	Stock No.	Description
vQ5	46367101	2SC2603
	or 46391901	2SC2785
vQ7	46367101	2SC2603
	or 46391901	2SC2785
vQ8	46367001	2SA1115
	or 46392001	2SA1175
vQ9	46367101	2SC2603
	or 46391901	2SC2785
vQ10	46367101	2SC2603
	or 46391901	2SC2785
vQ11	46367001	2SA1115
	or 46392001	2SA1175

•IC		
vIC1	07264600	MSM4066RS



## Parts List &lt;F-3856&gt;

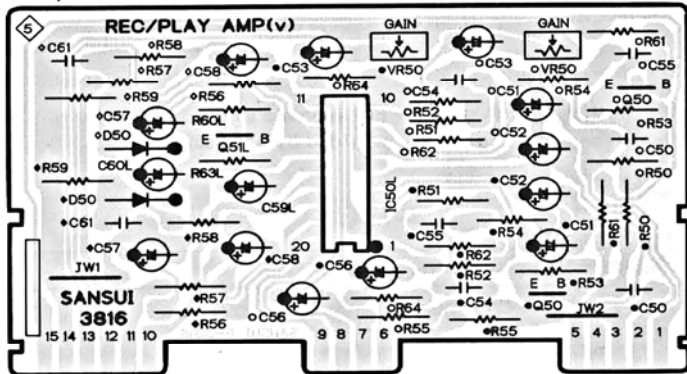
Parts No.	Stock No.	Description
•Diode		
vD1	03117600	1S2473D
	or 46086000	1S1588
vD2	03117600	1S2473D
	or 46086000	1S1588
vD3	03117600	1S2473D
	or 46086000	1S1588
vD4	03117600	1S2473D
	or 46086000	1S1588
vRL1	11504700	Relay
•Transistor		
wQ2	46367101	2SC2603
	or 46391901	2SC2785

Parts No.	Stock No.	Description
wQ18	46367001	2SA1115
	or 46392001	2SA1175
wQ19	46367001	2SA1115
	or 46392001	2SA1175
wQ20	46359701	2SA952
wQ21	46367101	2SC2603
	or 46391901	2SC2785
•Diode		
wD1	03117600	1S2473D
	or 46086000	1S1588
wD2	03117600	1S2473D
	or 46086000	1S1588
wD13	03117600	1S2473D
	or 46086000	1S1588

Parts No.	Stock No.	Description
wD14	03117600	1S2473D
	or 46086000	1S1588
wD15	03117600	1S2473D
	or 46086000	1S1588
wD16	03117600	1S2473D
	or 46086000	1S1588
wD20	03117600	1S2473D
	or 46086000	1S1588
wR44	46249200	82Ω 1W N.I.R.
wR45	46249200	82Ω 1W N.I.R.
wC12	07216600	47000pF 25V C.C.

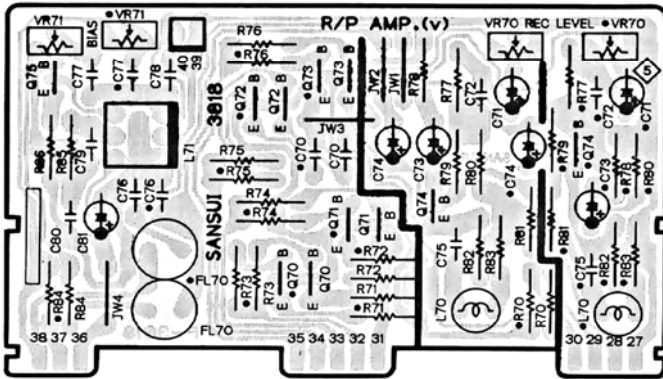
## 5-3. F-3816 Mic Amp. &amp; Auto Level Control Circuit Board (Stock No. 00705401)

Component Side



## 5-5. F-3818 REC Amp. Circuit Board (Stock No. 00705601)

Component Side



\* Note: On this circuit board, the left channel is specified by "•" mark on top of the parts No.

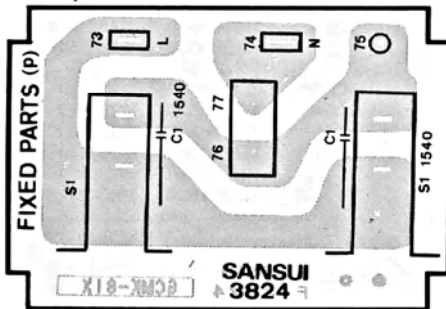
Parts List

Parts No.	Stock No.	Description
• Transistor		
vQ70	46367101	2SC2603
	or 46391901	2SC2785
vQ71	46367101	2SC2603
	or 46391901	2SC2785
vQ73	46367101	2SC2603
	or 46391901	2SC2785
vQ74	46367101	2SC2603
	or 46391901	2SC2785
vQ75	46362301	2SC1627
vC75	07216300	27000pF 25V C.C.
vC78	00405200	390pF 100V M.P.
vC79	07215400	4700pF 25V C.C.
vC80	07215400	4700pF 25V C.C.
vFL70	42904400	Bias Trap
vL70	46313900	Inductor 2.7mH
vL71	46362200	Bias OSC Coil
vVR70	07262000	20k $\Omega$ (B) S.V.R., Rec Level adj.
vVR71	07262100	50k $\Omega$ (B) S.V.R., Bias adj.

• Note: The circuit boards, F-3824, F-3857, F-3858, F-3859 & F-3860 are not supplied as the assembled. However, the individual parts on the circuit boards are provided by orders.

## 5-6. F-3824 Power Switch Circuit Board

Component Side

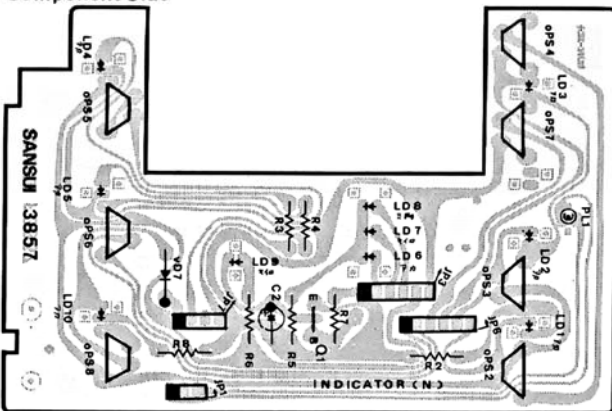


Parts List

Parts No.	Stock No.	Description
pC1	46425800	10000pF 400V C.C.
pZ20	46360300	Push SW., Power

## 5-7. F-3857 Control Switch Circuit Board

Component Side



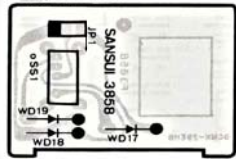
Parts List

Parts No.	Stock No.	Description
• Transistor		
nQ1	46367101	2SC2603
	or 46391901	2SC2785

Parts No.	Stock No.	Description
• Light Emitting Diode		
nLD1	46176900	TLS-123 (Red)
nLD2	46176900	TLS-123 (Red)
nLD3	46176900	TLS-123 (Red)
nLD4	46176900	TLS-123 (Red)
nLD5	46176900	TLS-123 (Red)
nLD6	46176900	TLS-123 (Red)
nLD7	07251000	TLY-123 (Yellow)
nLD8	07250900	TLG-123 (Green)
nLD9	07251000	TLY-123 (Yellow)
nLD10	46176900	TLS-123 (Red)
nPL1	46315900	Pilot Lamp 150mA 12V
oPS2	46395900	Push SW. (REW)
oPS3	46395900	Push SW. (FF)
oPS4	46395900	Push SW. (PLAY)
oPS5	46395900	Push SW. (REC)
oPS6	46395900	Push SW. (PAUSE)
oPS7	46395900	Push SW. (STOP)
oPS8	46395900	Push SW. (REC MUTE)
• Diode		
vD5	03117600	1S2473D
	or 46086000	1S1588

## 5-8. F-3858 Compu Edit. &amp; Timer Switch

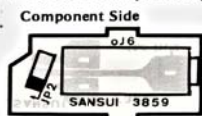
Component Side      Circuit Board



## Parts List

Parts No.	Stock No.	Description
oS1	46408600	Slide SW., TIMER-Compu Edit.
•Diode		
wD17	03117600 or 46086000	1S2473D 1S1588
wD18	03117600 or 46086000	1S2473D 1S1588
wD19	03117600 or 46086000	1S2473D 1S1588

## 5-9. F-3859 Headphone Jack Circuit Board

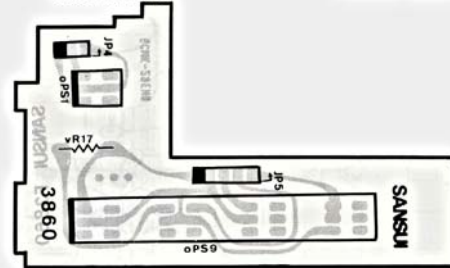


## Parts List

Parts No.	Stock No.	Description
oJ6	46265700	Headphone Jack

## 5-10. F-3860 AMPS &amp; DOLBY NR Switch

Component Side      Circuit Board



## Parts List

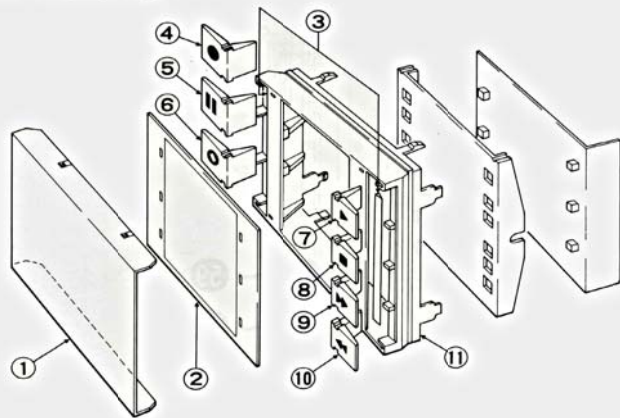
Parts No.	Stock No.	Description
oPS1	46408700	Push SW., AMPS
oPS9	46408800	Push SW., DOLBY NR-tape selector

## • Abbreviations

C.R. : Carbon Resistor	E.B. : Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor
Ce.R. : Cement Resistor	Ta.C. : Tantalum Capacitor
M.R. : Metal Film Resistor	F.C. : Film Capacitor
F.R. : Fusing Resistor	M.P. : Metallized Paper Capacitor
N.I.R. : Non-Inflammable Resistor	P.C. : Polystyrene Capacitor
C.C. : Ceramic Capacitor	G.C. : Gimmic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation	V.R. : Variable Resistor
E.C. : Electrolytic Capacitor	S.V.R. : Semi Variable Resistor
E.L. : Low Leak Electrolytic Capacitor	SW. : Switch

## 6. OTHER PARTS

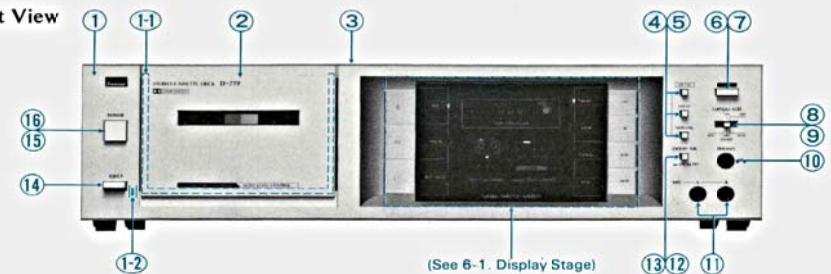
## 6-1. Display Stage



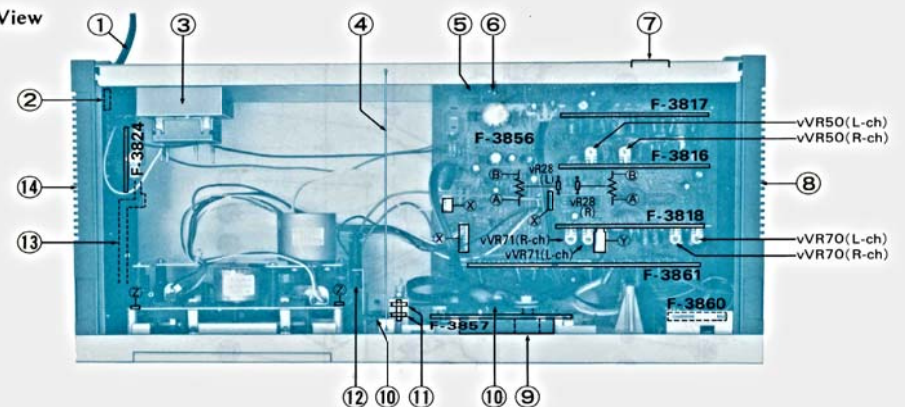
## Parts List &lt;Display Stage&gt;

Parts No.	Stock No.	Description
1	47020600	Display Cover
2	07958400	Display Panel (Silver Model)
	07967200	Display Panel (Black Model)
3	47071400	Cushion Rubber
4	07926200	Push Knob, REC
5	07926000	Push Knob, PAUSE
6	07926100	Push Knob, REC MUTE
7	07924700	Push Knob, PLAY
8	07924500	Push Knob, STOP
9	07924800	Push Knob, FF
10	07924900	Push Knob, REW
11	47020400	Display Holder (Silver Model)
	07921900	Display Holder (Black Model)

## 6-2. Front View



## 6-3. Top View



## Parts List &lt;Front View&gt;

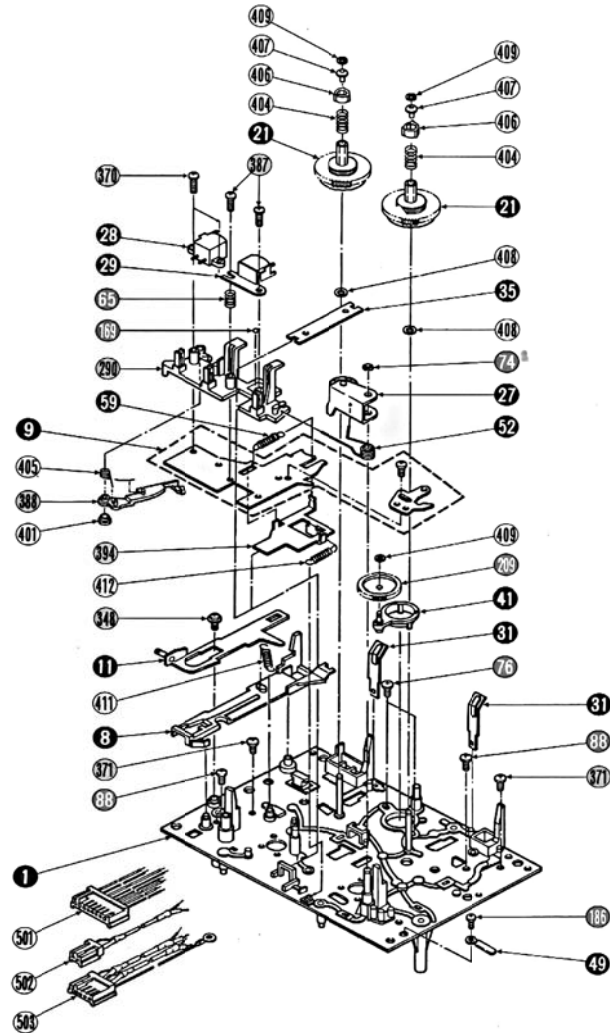
Parts No.	Stock No.	Description
1	07989100	Front Panel Ass'y (Silver Model)
	07989200	Front Panel Ass'y (Black Model)
1-1	07992300	Cassette Well Ass'y
1-2	07989900	Cassette Well Spring
2	07966500	Cassette Lid Ass'y (Silver Model)
	07966600	Cassette Lid Ass'y (Black Model)
3	07966900	Bonnet
4	47005600	Push Knob, Tape Selector
		<Silver Model>
	07917300	Push Knob, Tape Selector
		<Black Model>
5	46408800	Push Switch, Tape Selector
6	07917400	Push Knob, AMPS <Silver Model>
	07917500	Push Knob, AMPS <Black Model>
7	46408700	Push Switch, AMPS
8	07945600	Slide Knob, Compu Edit-TIMER
		<Silver Model>
	07945700	Slide Knob, Compu Edit-TIMER
		<Black Model>
9	46408600	Slide Switch, Compu Edit-TIMER
10	46265700	HEAD PHONE Jack
11	46212000	MIC Jack
12	47005600	Push Knob, DOLBY NR
		<Silver Model>
	07917300	Push Knob, DOLBY NR
		<Black Model>
13	46408800	Push Switch, DOLBY NR
14	07945400	Push Knob, EJECT <Silver Model>
	07945500	Push Knob, EJECT <Black Model>
15	07971210	Push Knob, POWER <Silver Model>
	07911210	Push Knob, POWER <Black Model>
16	46360300	Push Switch, POWER

## Parts List &lt;Top View&gt;

Parts No.	Stock No.	Description
1	38005400	Power Supply Cord
2	07917700	Power Supply Cord Cover
3	15009001	Power Transformer
4		Tension Wire
5	46148200	Mini Jack, Compu Edit.
6	46148200	Mini Jack, Compu Selector
7	46371500	4P Input/Output Terminal, REC/PLAY
8	07952700	Side Panel Ass'y (Right)
9	46370400	Tape Counter
10	07976700	Belt, Counter
11	07920600	Pulley
12	46370300	Eject Dumper
13	07920700	Joint Shaft, Power Switch
14	07952600	Side Panel Ass'y (Left)

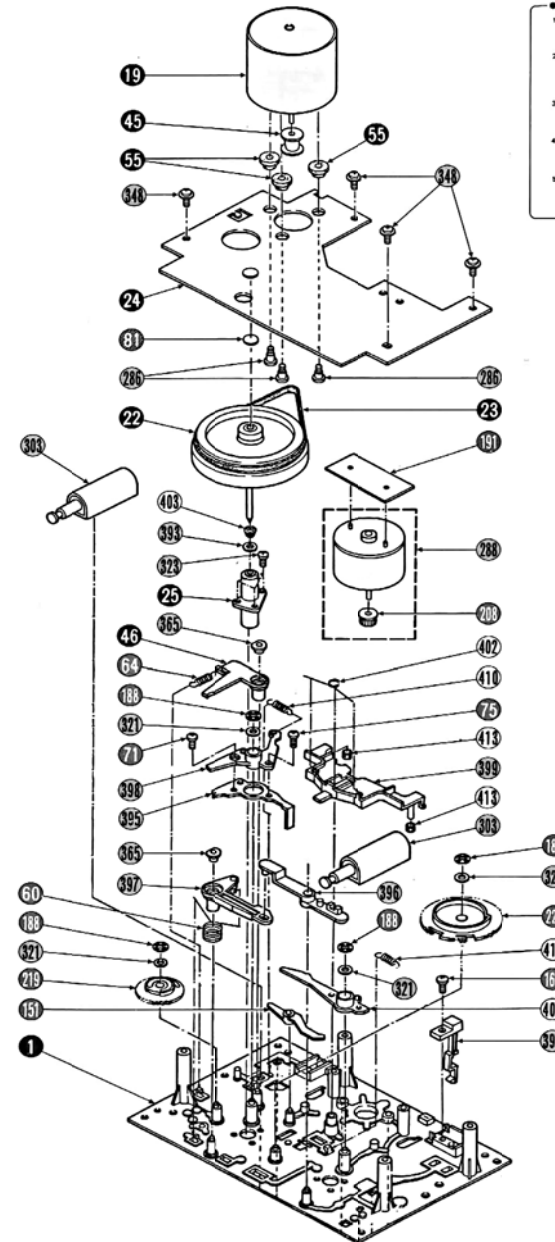
## 7. EXPLODED VIEW & PARTS LIST

### 7-1. Front View of Mechanism Chassis



• Though every part included in mechanism ass'y is numbered in exploded view, part unlisted in the parts list are not supplied.

### 7-2. Rear View of Mechanism Chassis



• Abbreviations			
1. Pan Head Tapping Screw ... PT Type	6. Binding Head SEMS 7 Screw ... BDF Type	11. Hex. Socket Screws ... SC Type	16. Retaining Ring (S Washer), S Type
2. Washer Head Tapping Screw ... WT Type	7. Binding Head Screw ... B Type	12. Slot Type Screws ... SS Type	17. Torsion Lock Washer (External) TLE Washer
3. Pan Head Screw ... P Type	8. Flat Counter Sink Head Screw ... F Type	13. Binding Head SEMS 8 Screw ... BSB Type	18. Wave Washer
4. Pan Head SEMS A Screw ... PSA Type	9. Flat Counter Sink Wood Screw ... FC Type	14. Spring Washer ... S Type	19. Header Nut H Type Nut
5. Pan Head SEMS B Screw ... PSB Type	10. Round Head Wood Screw ... RH Type	15. Plain Washer ... P Type	

1 ~ 59

60 ~ 229

230 ~ 399

400 ~ 503



## Parts List &lt;Mechanism Ass'y&gt;

Parts No.	Stock No.	Description
8	47014400	Slider Lock Plate
19	07721100	Capstan Motor
21	47014600	Reel Hub
22	47014700	Flywheel Ass'y (capstan)
23	47014800	Capstan Belt
27	47015000	Pinch Roller Ass'y
28	07997400	Erase Head
29	07997300	Rec/PB Head
31	47015100	Cassette Holder Spring
35	47015200	Slider Hold Plate Spring
41	47015300	Idler Gear Arm
45	47015400	Pulley, capstan motor
46	47015500	AMPS Lock Lever
52	47015600	Pinch Roller Spring
55	47015700	Cushion, Motor
59	47015800	Play Slider Plate Spring
60	47015900	Play Lock Lever Spring
64	47016000	AMPS Lock Lever Spring
65	47016100	Head adjust Spring
71	07736400	Binding Head Screw M2.6 x 3
74	00489000	E ring d = 2.0
75	47016200	Binding Head Screw M2.6 x 5
76	00421400	Binding Head Screw M2.6 x 8
88	00421200	Binding Head Screw M2.6 x 4
151	47016300	Brake Lever
162	00440500	Pan Head Tapping Screw M2.6 x 8
169	09462700	Steel Ball D = 3.0
186	47016200	Binding Head Screw M2.6 x 5
188	51822900	CS Type Ring d = 3.0
209	47016500	Idler Gear
219	47016600	Cam Gear, AMPS
221	47016700	Cam Gear, Play
286	47016800	Special Screw M2.6 x 1
288	47016900	Reel Motor Ass'y (with Gear ⑩)
290	47017000	Head Base
303	47017100	Plunger Solenoid, Play-AMPS
321	00466400	Plain Washer d = 3.0
323	47017200	Binding Head Tapping Screw M2.6 x 3
348	47004600	Washer Head Tapping Screw M2.6 x 8
365	47017300	Bush
370	47017400	Binding Head Deltite Screw M2.0 x 14
371	00424700	Binding Head Screw M2.6 x 3
387	47017500	Binding Head Deltite Screw M2.0 x 13
388	47017600	Kick Lever Ass'y
391	47017700	Leaf Switch, rec prevention
393	47017800	Washer d = 2.5
396	47018000	Plunger Lever
397	47018100	Lock Plate Lever
398	47018200	AMPS Lever
399	47018300	Brake Slider
400	47018400	Play Lever
401	47018500	Spacer
402	47018600	Brake Spring
403	47018700	Flywheel Spring
404	47018800	Reel Spring
405	47018900	Kick Lever Spring
406	47019000	Reel Collar
407	47019100	Reel Cap
408	07513000	Thrust Washer d = 2.0
409	47019200	Thrust Washer d = 1.6
410	47019300	Play Lever Spring
411	47019400	Lock Slider Spring
412	47019500	Play Slider Spring
413	47019600	Cushion, Brake

## 8. MAIN PARTS REPLACEMENT

## A. Mechanism assembly

(See EXPLODED VIEW and Top View on Page 10)

- 1) Remove the bonnet and the bottom plate.
- 2) Extract three connectors ⑧ on the Main Circuit Board (F-3856).
- 3) Extract a connector ⑨ on the Rec Amp Circuit Board F-3818.
- 4) Remove four screws ⑫ fixing mechanism assembly.
- 5) Pull out the mechanism assembly from the rear panel side.

## B. Reel Motor ⑩

- 1) Pull out the mechanism assembly from the rear panel side.
- 2) Remove two screws ⑦ fastening reel motor and idler gear arm ⑪.
- 3) Pull out reel motor from the back side.

## C. Idler Gear ⑪

- 1) Pull out the mechanism assembly from the rear panel side.
- 2) Remove the washer ⑭, retaining the idler gear.
- 3) Remove the idler gear from the idler gear arm.

## D. Reel Hub ⑫ · Cushion (brake) ⑬

- 1) Pull out the mechanism assembly from the rear panel side.
- 2) Remove the thrust washer ⑮, reel cap ⑯, reel collar ⑰ and reel spring ⑱ and pull out the reel hub.
- 3) Extract the cushion (brake) from the brake slider.

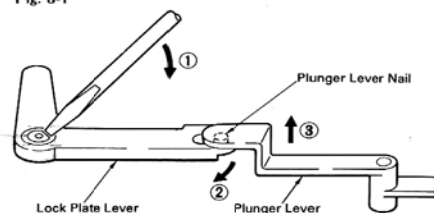
## E. Capstan Motor ⑲, Flywheel ⑳

- 1) Pull out the mechanism assembly from the rear panel side.
- 2) Remove four screws ②④ fixing the capstan motor mounting plate.
- 3) Remove three screws ②⑥ fastening capstan motor.
- 4) Remove the capstan motor.
- 5) Pull out the flywheel from mechanism assembly.

## F. Play Cam Gear ㉑ (See Fig. 8-1)

- 1) Perform the same manner as for the flywheel.
- 2) Remove the bush ㉒ fastening the lock plate lever ㉓.
- 3) Take out the plunger lever nail from the lock plate lever.
- 4) Remove the lock plate lever.
- 5) Remove the CS type ring ㉔ retaining the play cam gear.
- 6) Take out the plain washer ㉕ and extract the play cam gear.

Fig. 8-1



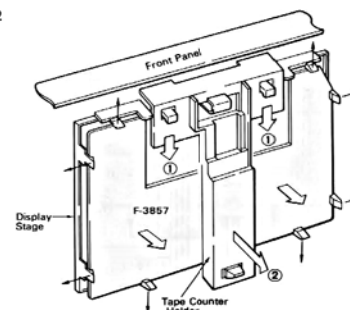
## G. AMPS Cam Gear ㉖

- 1) Perform the same manner as for the flywheel.
- 2) Remove the AMPS lock lever spring ㉗ from the AMPS lock lever ㉘.
- 3) Remove the bush ㉙ fastening AMPS lock lever and take out the AMPS lock lever.
- 4) Remove the CS type ring ㉚ fastening AMPS cam gear.
- 5) Remove the plain washer ㉛ and extract the AMPS cam gear.

## H. Display Stage

- 1) Remove bonnet and bottom plate.
- 2) Remove the tape counter belt and relay pulley. (See Top View on page 10)
- 3) Remove the tape counter holder from front panel (See Fig. 8-2)
- 4) Remove the circuit board F-3857 from display stage. (See Fig. 8-2)
- 5) Remove the display stage from front panel assembly.

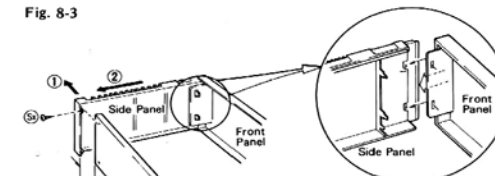
Fig. 8-2



## I. Side Panel L (R)

- 1) Remove the bonnet and the bottom plate.
- 2) Remove the screw 5x fixing side panel L (R).
- 3) Shift the position of the side panel L (R) 2 cm in the arrow direction ① and then pull it the arrow direction ② to remove the side panel L (R). (See Fig. 8-3)

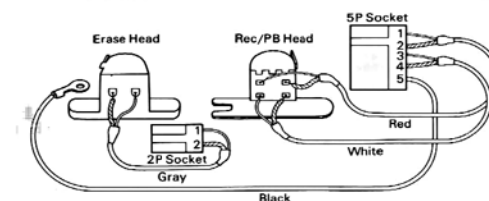
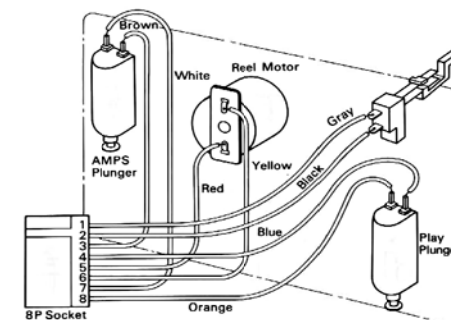
Fig. 8-3



## J. Front Panel Ass'y

- 1) Remove the bonnet and the bottom plate.
- 2) Remove the side panel L and R. (See Replacement I).
- 3) Remove tension wire. (See Top View on page 10).
- 4) Remove counter belt and relay pulley (See Top View on page 10) from front panel assembly.
- 5) Remove the mechanism assembly (See Replacement A).
- 6) Remove tape counter holder from front panel assembly (See Fig. 8-2).
- 7) Remove the circuit board F-3857 from display stage. (See Fig. 8-2).
- 8) Remove the circuit board F-3859 and F-3860 from front panel.
- 9) Remove the display stage from front panel assembly (See Replacement H).

## 9. WIRING OF MECHANISM Ass'y

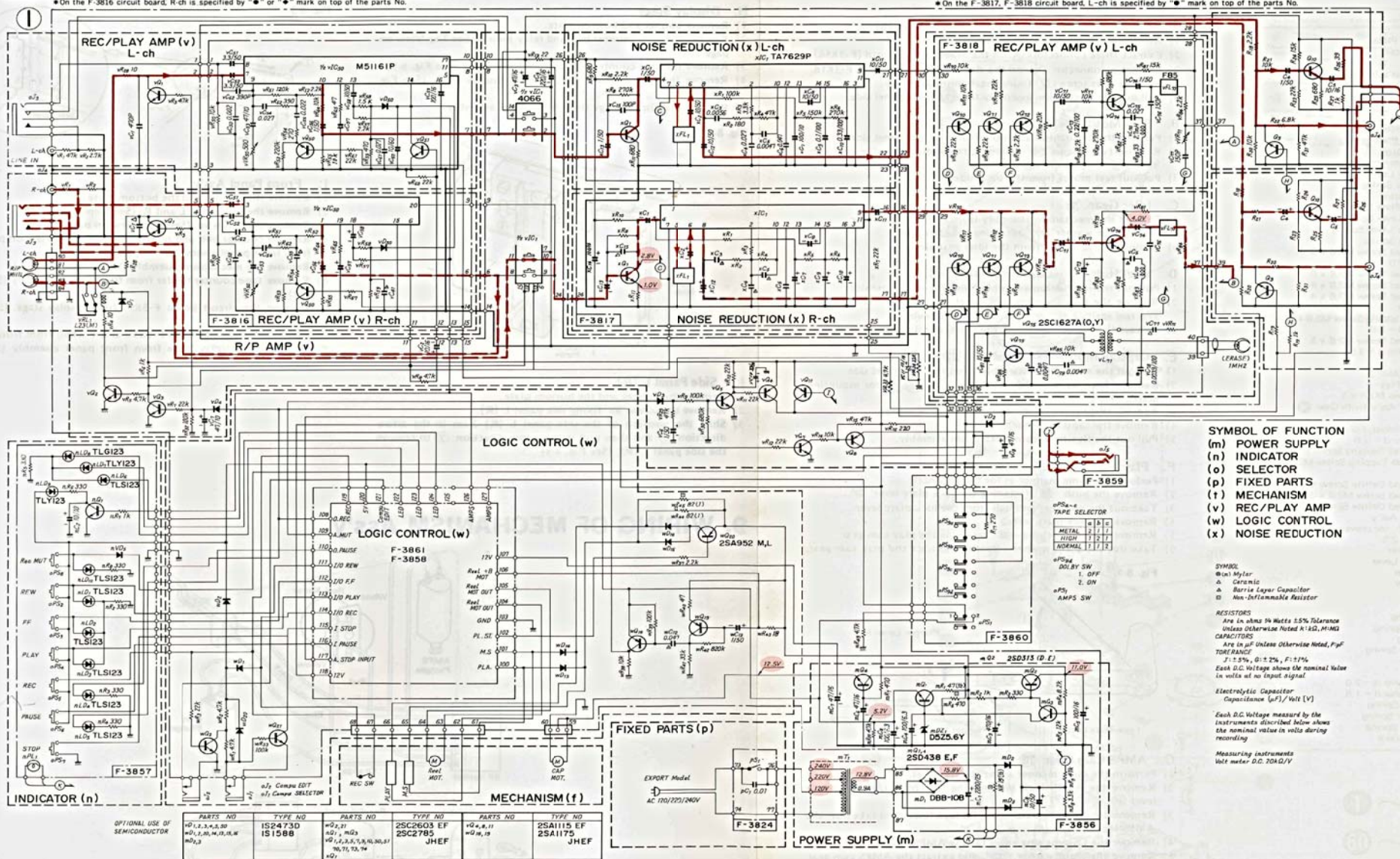


# 10. SCHEMATIC DIAGRAM 10-1. Amp. Section

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• On the F-3817, F-3818 circuit board, L-ch is specified by "•" mark on top of the parts No.



SYMBOL OF FUNCTION  
 (m) POWER SUPPLY  
 (n) INDICATOR  
 (o) SELECTOR  
 (p) FIXED PARTS  
 (t) MECHANISM  
 (v) REC/PLAY AMP  
 (w) LOGIC CONTROL  
 (x) NOISE REDUCTION

SYMBOL  
 (m) Mylar  
 (n) Ceramic  
 (o) Barrie Layer Capacitor  
 (p) Non-Inflammable Resistor

RESISTORS  
 Are in ohms 1% Watts 5% Tolerance  
 Unless Otherwise Noted K=10, M=1000

CAPACITORS  
 Are in pF unless Otherwise Noted, P=pF

TOLERANCE  
 J=1-5%, K=1-10%, F=1-1%

Each D.C. Voltage shown the nominal value in volts at no input signal

Electrolytic Capacitor  
 Capacitance (μF)/Volt [V]

Each D.C. Voltage measured by the instruments described below shows the nominal value in volts during recording

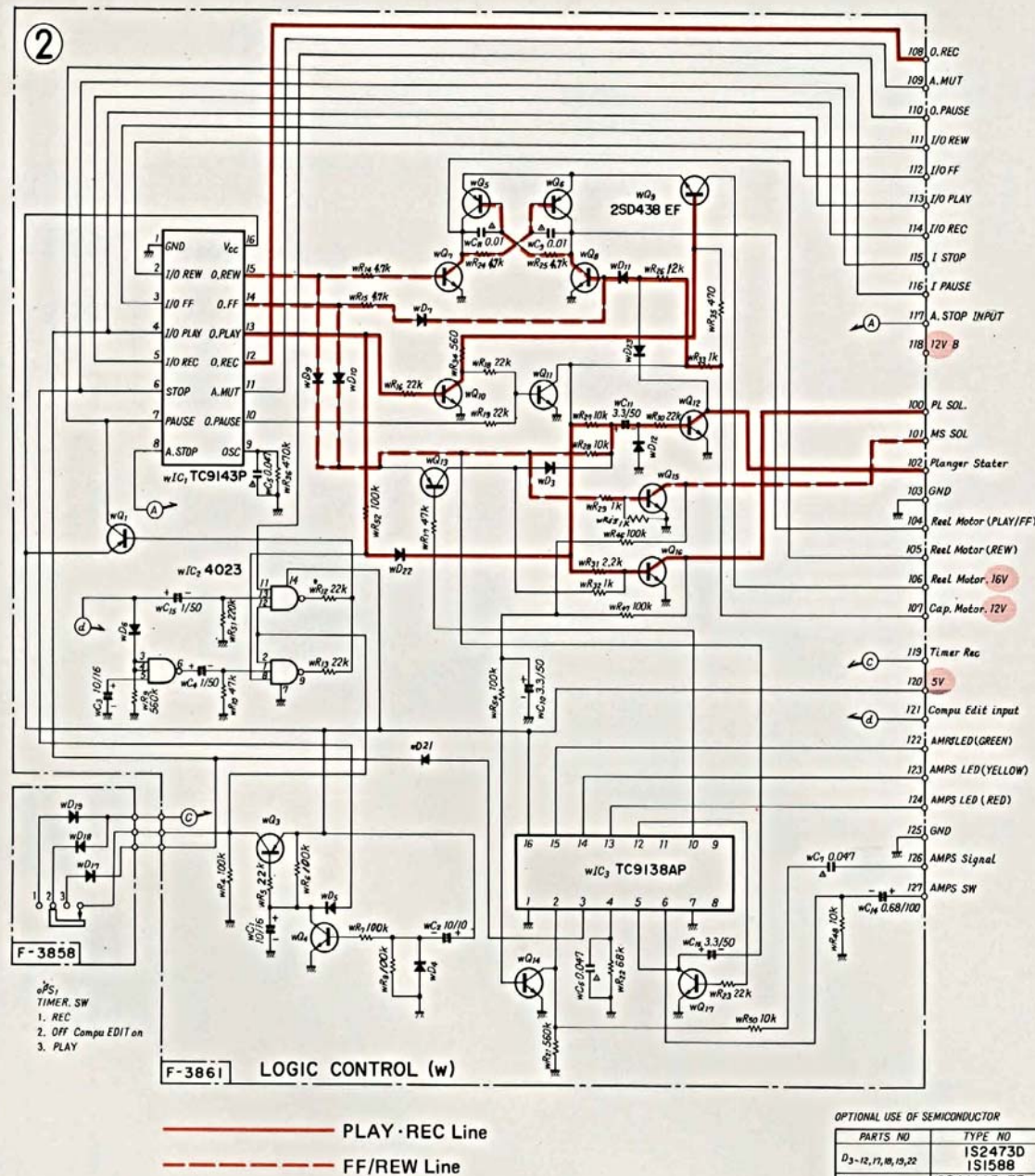
Measuring instruments  
 Volt meter D.C. 20kΩ/V

PLAY Signal Line  
 REC Signal Line



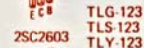
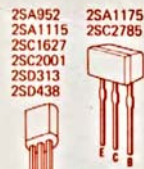
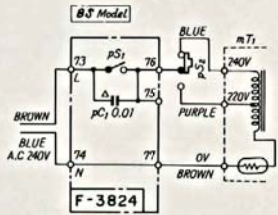
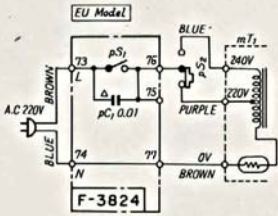
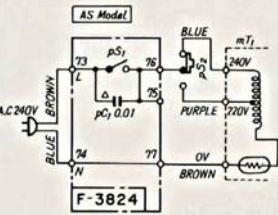
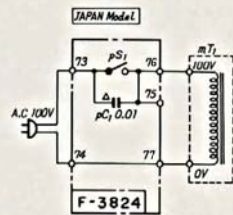
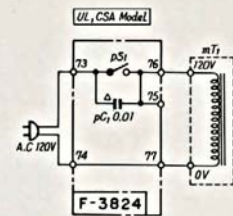
## 10-2. Mechanism Control Section

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## OPTIONAL USE OF SEMICONDUCTOR

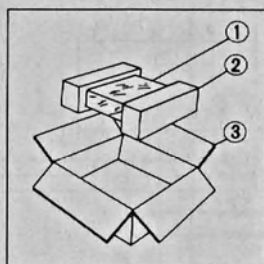
PARTS NO	TYPE NO
D <sub>3-12, 17, 18, 19, 22</sub>	1S2473D 1S1588
Q <sub>1, 3, 5, 6, 13</sub>	2SA1115 EF 2SA1175 JHEF
Q <sub>4, 7, 8, 10, 11, 12, 14, 17</sub>	2SC2603 EF 2SC2785 JHEF
Q <sub>15, 16</sub>	2SC2001 L, M





## 11. PACKING LIST

Parts No.	Stock No.	Description
1	91263810	Vinyl Cover
2	07949000	Styrofoam Packing
3	07989400	Carton Case (Silver Model)
	07989500	Carton Case (Black Model)



## 12. ACCESSORY LIST

Stock No.	Description
46356300	Operating Instruction
38103300	PJP Cord x 2
46267300	Mini Plug Cord
94300500	Head Cleaner (cotton buds)



SANSUI ELECTRIC CO., LTD.:

SANSUI ELECTRONICS CORPORATION:

SANSUI ELECTRONICS (U.K.) LTD.:  
SANSUI ELECTRONICS G.M.B.H.:

14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan  
 PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)  
 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.  
 333 West Alondra Blvd. Gardena, California 90247 U.S.A.  
 3036 Koapaka St. Honolulu, Hawaii 96819 U.S.A.  
 Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England  
 Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany

(SM1-59)

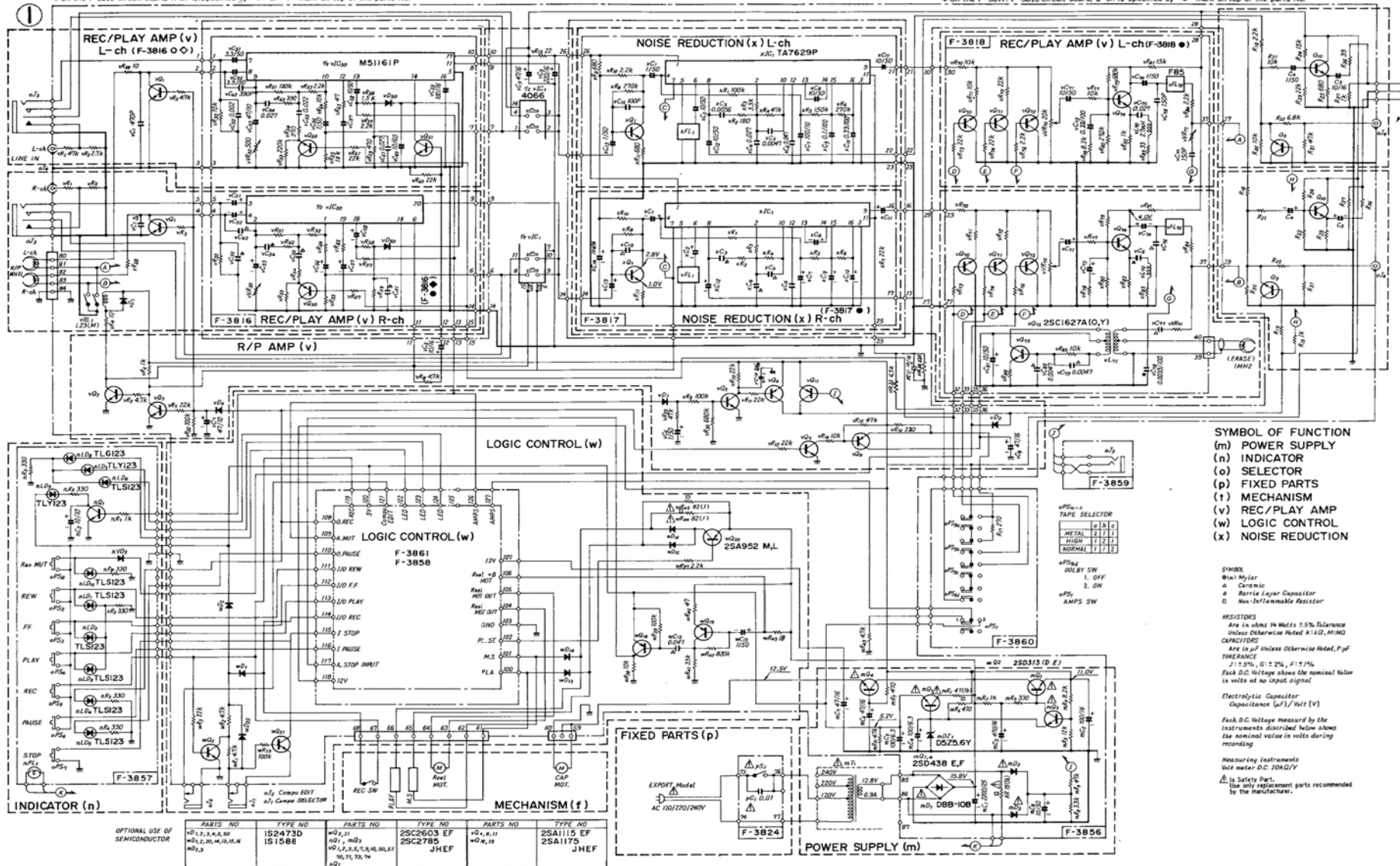
Printed in Japan (820030M) &lt;Stock No. 36470100&gt;

## 10. SCHEMATIC DIAGRAM 10-1. Amp. Section

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• On the F-3817, F-3818 circuit board, L-ch is specified by "•" mark on top of the parts No.



1

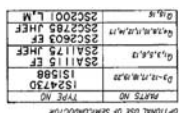
2

3

4

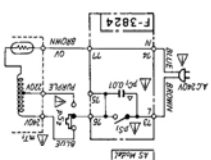
5

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- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



© 1997 USE OF SEMI-STRUCTURED

Use only replacement parts recommended by the manufacturer.

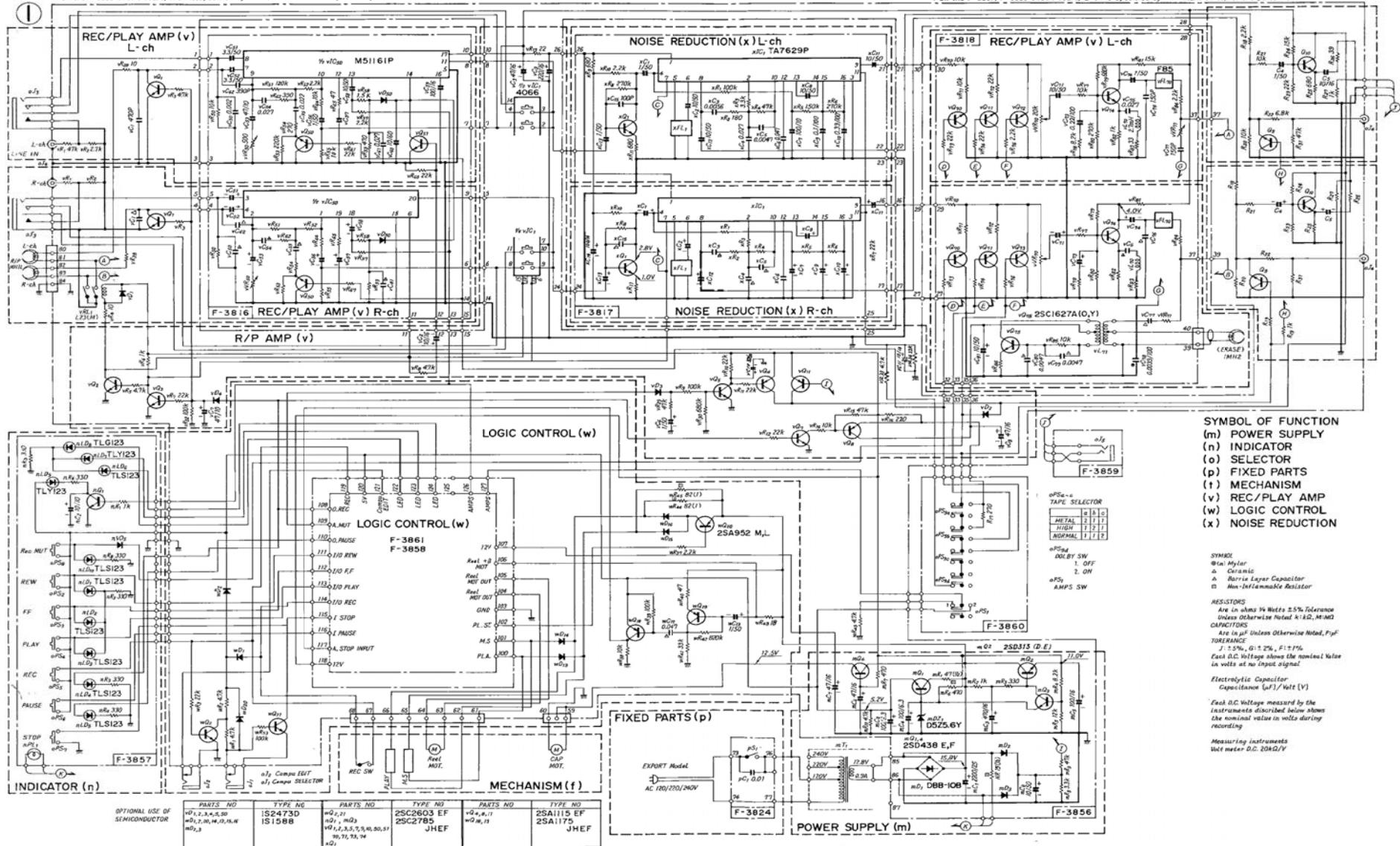


# 10. SCHEMATIC DIAGRAM 10-1. Amp. Section

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 \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

• On the F-3817, F-3818 circuit board, L-ch is specified by "•" mark on top of the parts No.

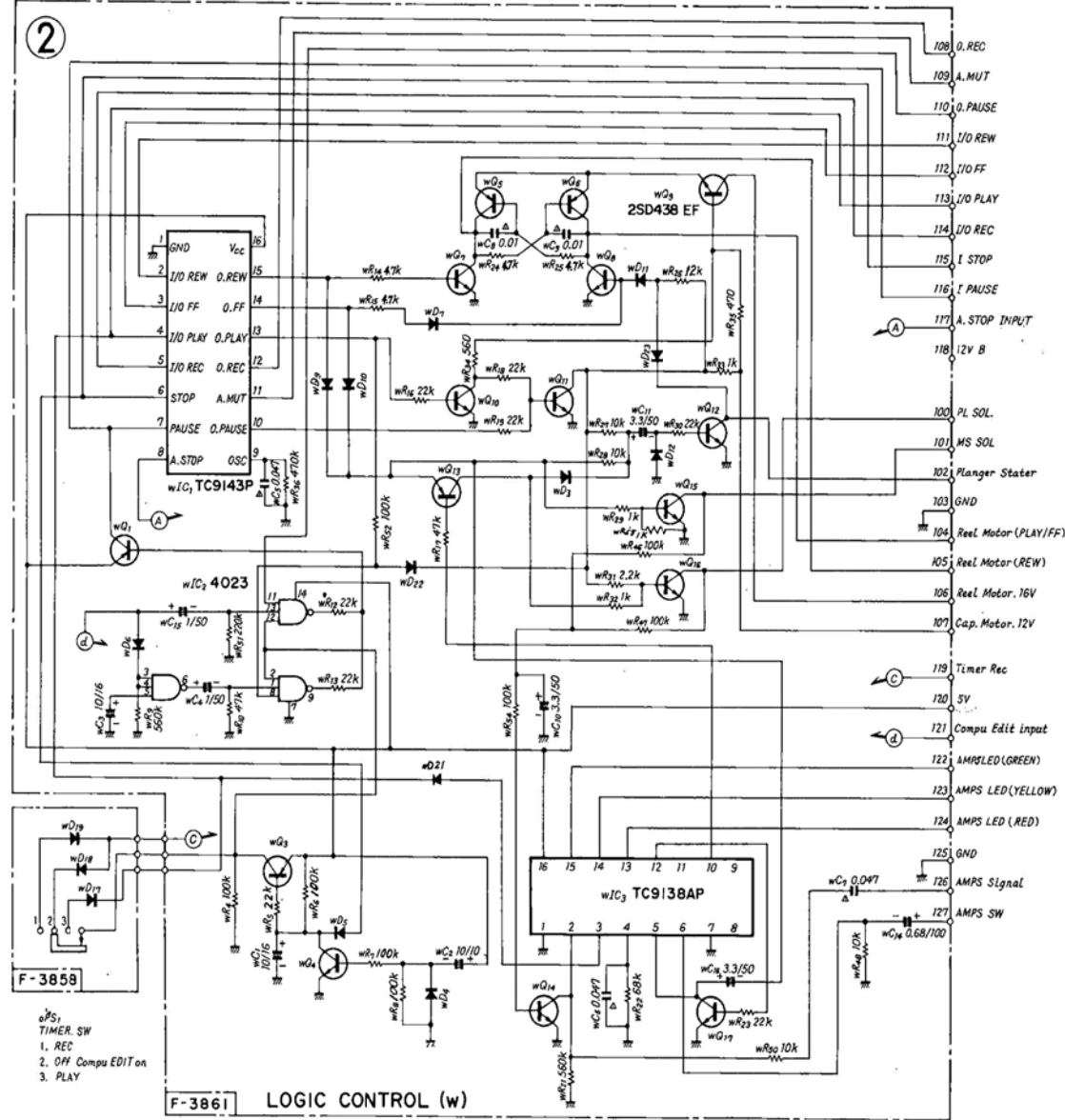


## 10-2. Mechanism Control Section

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PLAY · REC Line  
FF/REW Line

## OPTIONAL USE OF SEMICONDUCTOR

PARTS NO	TYPE NO
D3-12, 17, 18, 19, 22	IS2473D IS1588
Q1, 3, 5, 6, 13	2SA1115 EF 2SA1175 JHEF
Q4, 7, 8, 10, 11, 12, 14, 17	2SC2603 EF 2SC2785 JHEF
Q15, 16	2SC2001 L, M

